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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,146	07/08/2003	Thomas Kuckelkorn	2678	8229

7590 09/16/2004

STRIKER, STRIKER & STENBY  
103 East Neck Road  
Huntington, NY 11743

EXAMINER
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PRICE, CARL D

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/615,146

Applicant(s)

KUCKELKORN ET AL.

Examiner

CARL D. PRICE

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "parabolic collector" (claims 17-27) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

**Claim Objections**

Claim 8 is objected to because of the following informalities: The phrase "a glass-metal transitional element" should be - - **said** glass-metal transitional element - -. Appropriate correction is required.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 14: Rejected under 35 U.S.C. 112, second paragraph**

Claim 14 is are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claims are vague and indefinite since it is unclear which portion(s) of the previously recited elements have "two ends" where the at least one expansion compensating device (10) is arranged at each of the two ends".

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

*The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).*

**Claims 1, 2, 8-12, 14, 15: Rejected under 35 U.S.C. 102(b)**

Claims 1, 2, 8-12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP57-95544.

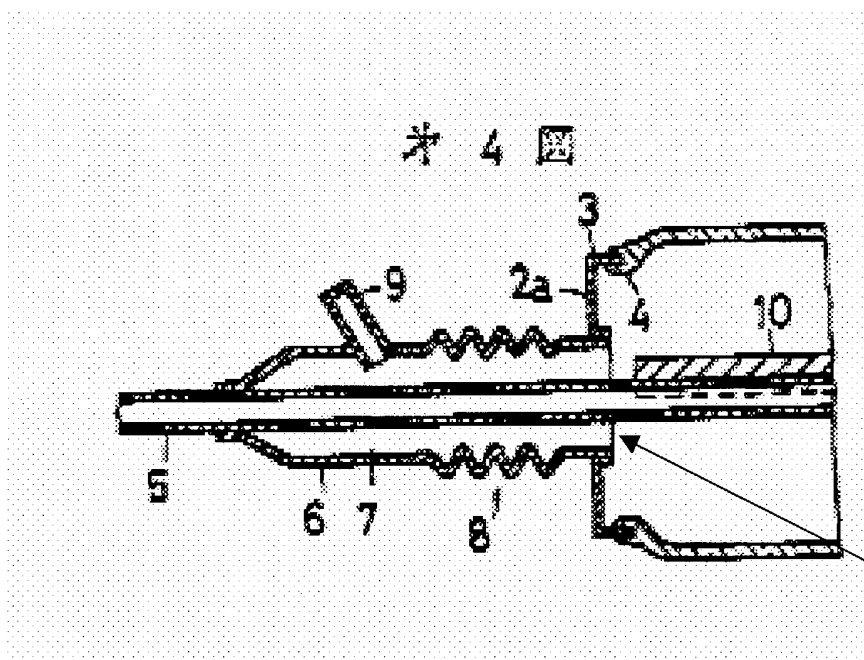
With regard to claims 1, 2, 8-12, 14 and 15, the recitation "for a parabolic collector in a solar heat collecting apparatus" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or

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structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

JP57-95544 shows and discloses (see the English language Abstract) an absorber pipe including:

- a central metal pipe (5),
- a glass sleeve tube (1) surrounding the central metal pipe (5) so that an annular space (not referenced) is formed between the central metal pipe and the glass tubular sleeve,
- a glass-metal transitional element (3) arranged on a free end (4) of the glass tubular sleeve;

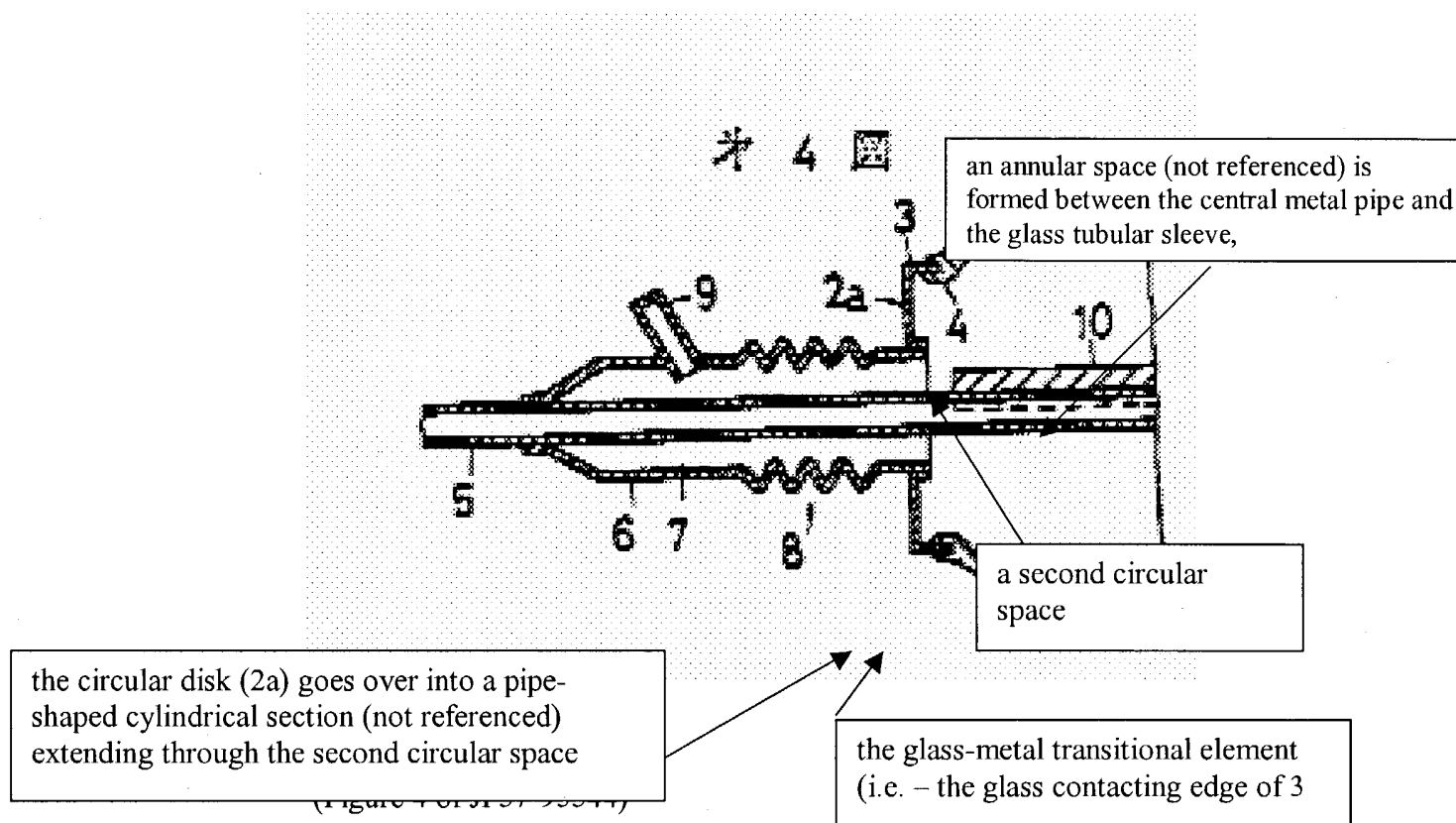


Expansion compensating bellows (8) is arranged at least partially in the annular space at one end

(Figure 4 of JP57-95544)

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- each of the two ends of the pipe having one expansion compensating folding bellows (8) connecting the central metal pipe (3) and the glass-metal transitional element (5) with each other so as to be slidable relative to each other in a longitudinal direction; and
- wherein the at least one expansion compensating device () is arranged at least partially in the annular space (4) between the central metal pipe (3) and the glass-metal transitional element (5).
- wherein an interior end of the folding bellows (8) is connected with the sleeve tube (1) by a connecting element (2a) and by a glass-metal transitional element (3) and an outer end (6) of the folding bellows is connected with the metal pipe (5);
- wherein the connecting element (2a) extends from the interior end (not referenced) of the folding bellows through a second circular space (not reference; i.e.- the annular space outward of the bellows) formed between the folding bellows (11) and the sleeve tube (2);
- wherein the connecting element (2a) extends *radially outward* beyond the outer end (6) of the folding bellows;
- wherein the connecting element (2a) has a circular disk (2a) attached to the folding bellows (8) and the circular disk (16) goes over into a pipe-shaped cylindrical section (not referenced) extending through the second circular space (not referenced);
- wherein ; not referenced) is attached to an outer collar (3) formed on the connecting element.



### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).*



**Claims 1-27: Rejected under 35 U.S.C. 103(a)**

Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP57-95544 in view of US4133298 (Hayama).

With regard to claims 1-16, the recitation "for a parabolic collector in a solar heat collecting apparatus" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

JP57-95544 shows and discloses (see the English language Abstract) an absorber pipe including:

- a central metal pipe (5),
- a glass sleeve tube (1) surrounding the central metal pipe (5) so that an annular space (not referenced) is formed between the central metal pipe and the glass tubular sleeve,
- a glass-metal transitional element (3) arranged on a free end (4) of the glass tubular sleeve;
- each of the two ends of the pipe having one expansion compensating folding bellows (8) connecting the central metal pipe (3) and the glass-metal transitional element (5) with each other so as to be slidable relative to each other in a longitudinal direction; and
- wherein the at least one expansion compensating device ( ) is arranged at least partially in the annular space (4) between the central metal pipe (3) and the glass-metal transitional element (5).

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- wherein an interior end of the folding bellows (8) is connected with the sleeve tube (1) by a connecting element (2a) and by a glass-metal transitional element (3) and an outer end (6) of the folding bellows is connected with the metal pipe (5);
- wherein the connecting element (2a) extends from the interior end (not referenced) of the folding bellows through a second circular space (not reference; i.e.- the annular space outward of the bellows) formed between the folding bellows (11) and the sleeve tube (2);
- wherein the connecting element (2a) extends *radially outward* beyond the outer end (6) of the folding bellows;
- wherein the connecting element (2a) has a circular disk (2a) attached to the folding bellows (8) and the circular disk (16) goes over into a pipe-shaped cylindrical section (not referenced) extending through the second circular space (not referenced);
- wherein ; not referenced) is attached to an outer collar (3) formed on the connecting element.

JP57-95544 discloses the invention substantially as set forth in the claimed invention with possible exception to:

- the bellows being located within the annular space and including connecting elements attached either to the metal tube end of the bellows or to the glass tube end of the bellows; and
- interior surfaces of the collecting tube being coated with a mirror/reflective material to prevent heat from being released to the outside, which otherwise would be release

US4133298 (HAYAMA), from the same solar energy collecting apparatus field of endeavor as JP57-95544, teaches:

- a longitudinally extending linear parabolic reflector having a focal line and at least one absorber pipe;

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- a bellows being located within the annular space (15; see figure 12), or alternatively extending exterior of the annular space (see figure 15), and including connecting collar elements (not referenced; figure 13) attached to the metal tube end of the bellows or collar elements (14; figures 12,15) attached to the glass tube end of the bellows; and
- interior surfaces of the collecting tube being coated with a mirror/reflective material (17) to prevent heat from being released to the outside, which otherwise would be release.

At column 5, line 37- column 6, line 15, US4133298 (HAYAMA) discloses;

Further, the **expandable member 15** and the cap 100 may be formed from flexible material, of course, **and they are not limited to the abovementioned bellows shape** but may be of any construction that can absorb the difference between the amounts of thermal expansion and contraction of the outer cylinder 11 and the heat collecting pipe 12. **The inside of the outer cylinder 11 is made vacuous in order to prevent heat release of outside due to the convection of gas e.g. air, intrusion of moisture and the inner circumferential surface being dewed.** For these reasons, by providing ... and by operating the getters 16, a metal reflecting film 17 is applied on the inner surface of both of the end portions to be covered with the supporting member 2 of the outer cylinder 11. **This metal reflecting film 17 serves for preventing heat release from the portions, at the end of the outer cylinder 11, of the heat collecting pipe 12.** That is, since the heat collecting fin 13 attached to the heat collecting pipe 12 is so dimensioned as to be a little shorter in view of the error of the length of the heat collecting element 1 caused during manufacturing, the heat collecting fin 13 cannot be attached to the portions of the heat collecting pipe 12 corresponding to the end portions of the outer cylinder. **By providing the metal reflecting film 17 on the inner surface of such portions of the outer cylinder 11, heat radiated from the heat collecting pipe 12 is reflected by the reflecting film and not released to the outside, which otherwise would be released.** For the provision of the reflecting films, other means than the getters may be used which can positively provide the same. The heat collecting fin ..., so that the fin 13 is apt to contact the outer cylinder 11 to break the same, and the belowmentioned solar radiant energy from the reflecting plate 3 cannot be effectively received. Therefore, according to the present invention, the heat collecting fin 13 as a whole is adapted to be held in substantially flat condition by providing a waved or jagged thermal deformation absorbing part 13a at each end of the heat collecting fin 13.

In regard to claims 1-27, Official Notice is taken that it is well known to associate longitudinally extending linear parabolic reflectors having a focal line with absorber pipes for the purpose of providing a suitable and desired focus pattern on the collector. Furthermore, Official Notice is taken that it is well known to evacuate, make vacuum, or fill with an inert gas (i.e. – noble gas) the interior space of a collector glass tube to minimize heat loss through convection. Thus, in view of that which is well known and for the known purpose, it would have been obvious to a person having ordinary skill in the art to associate a longitudinally extending linear parabolic reflectors with absorber pipes of JP57-95544, and to fill the inner glass tube space with a “noble” gas, or evacuated. Also, in regard to claims 1-27, for the purpose of providing a suitable alternative bellows arrangement of JP57-95544, it would have been obvious to a person having ordinary skill in the art to modify the JP57-95544 bellows to be located within the annular space, in view of the teaching of US4133298 (HAYAMA). Furthermore, in regard to claims 7 and 23, for the purpose of prevent heat from being released to the outside, which otherwise would be release, it would have been obvious to a person having ordinary skill in the art to provide inner surfaces, (i.e. – the connecting and transitional elements) of the glass tube ends with a mirrored/reflective surface, in view of the teaching of US4133298 (HAYAMA). Also, in regard to claims 8-14, 19-22 and 24-27, for example, since the particular arrangement or positioning, shape, orientation, etc. of the various connecting and transitional elements would necessarily depend on numerous design concerns and parameters such as the overall size, shape and capacity of the collector, installation space requirement, the thermal and physical properties of selected collector components, etc. to

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form the collecting element as a circular disk having a conical or cylindrical section, to connect the bellows to the metal tube end of the bellows or to the glass tube end of the bellows, etc. can be viewed as nothing more than merely matters of choice in design absent the showing of any new or unexpected results produced therefrom over the prior art of record.

**Conclusion**

See the attached PTO FORM 892 for prior art made of record and not relied upon and which are considered pertinent to applicant's disclosure.

**USPTO CUSTOMER CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CARL D. PRICE** whose telephone number is **703-308-1953**. The examiner can normally be reached on Monday through Friday between **6:30am-3:00pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on **703-308-1935**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Carl D. Price', with a stylized flourish at the end.

**CARL D. PRICE**  
**Primary Examiner**  
**Art Unit 3749**

cp